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# OFFICIAL PROCEEDINGS

## Meeting of January, 1921

Volume XX.
No. - - - 1

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INCORPORATED OCTOBER 1913

# Canadian Railway Club

MONTREAL

## CONTENTS

REPORT OF JANUARY MEETING
also
PAPER AND DISCUSSION
on
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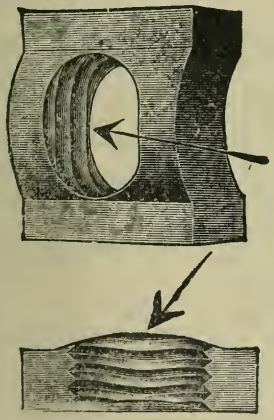

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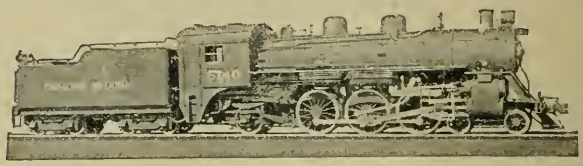

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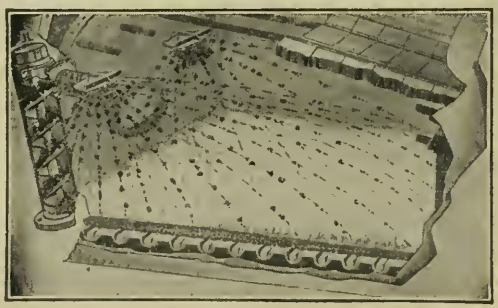

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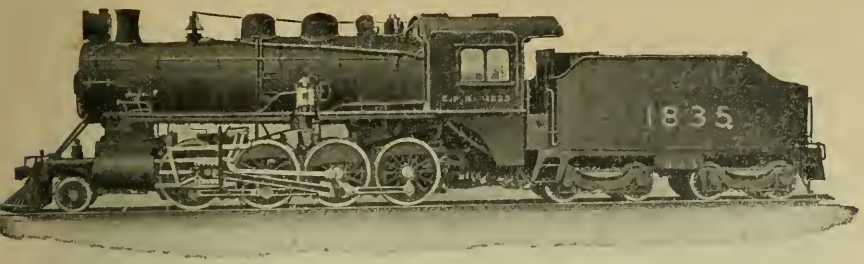


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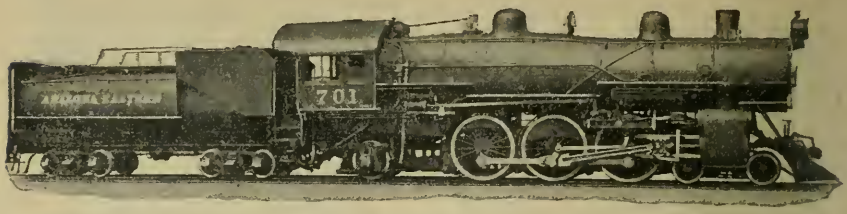


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W. A. BOOTH, Secretary, 131 Charron Street, Montreal.

Vol. XX. No. 1 **Montreal, Can., Jan. 8, 1921** 25c. per copy

# PROCEEDINGS OF THE CANADIAN RAILWAY CLUB.

Windsor Hotel, Montreal,

Chairman:

The meeting will please come to order. The Secretary tells me that the proceedings of the previous meeting have been mailed to you, and it will therefore be unnecessary to read them. I would call your attention to the cards which you will find on the chairs, and shall be glad if everybody will sign one of them and then pass the cards down to the end of each row so that the Secretary may go down later and pick them up. We will thus have a record of the attendance. If anyone has not got one of these cards there are plenty here on the table and they will be supplied if you will let us know. The Secretary will now read the names of applicants for membership.

Secretary:

Mr. President and gentlemen, the list of applications for membership follows:

## New Members.

Angus, David, Draughtsman, Canadian Pacific Railway, 788 Craig St., Montreal.

Baldwin, G. E., Mechanical Assistant, The Robinson Connector Co., 303 Imperial Bank Bldg., Montreal.

Barefoot, O. R., Draughtsman, Canadian Pacific Railway, Room 1100, Windsor Station, Montreal.

Barry, W. H., The Lincoln Electric Co., of Canada, Ltd., 128 Coristine Building, Montreal.

Bird, H., Gen. Mgr., Canadian Pneumatic Tool Co., 25-27 St. Antoine St., Montreal.

Brazier, G. W., Traffic Manager, Drummond McCall Co., Montreal. P. Q.

Britton, J., Master Mechanic, Canadian Steel Foundries Co., 2182 Pie X Blvd., Montreal, P.Q.

Brown, T., Draughtsman, Canadian Pacific Railway, Angus Shops, 588 7th Ave., Rosemount.

Burke. J. M., District M.M., Canadian Pacific Railway Montreal, P.Q.
Collins, T., Supt., Montreal Terminals. Candian Pacific Railway, Montreal, P.Q.
Cowan, L., Engr. Dept., The Crane Co., Ltd., Montreal, P.Q.
Crowhurst, W. H., H. A. Drury Company, 317 Craig St., W. Montreal. P.Q.
Culkin, R., Loco. Engr., Grand Trunk Railway. Montreal, P.Q.
Donald, T. F., Draughtsman, Canadian Pacific Railway, 1247 Parthenais St., Montreal, P.Q.
Hall, G. H., Draughtsman, Canadian Pacific Railway, 672 Durocher St., Montreal.
Hervey, C. L., Contractor, 310 Shaughnessy Bldg., Montreal, P.Q.
Hickey, H. C., District Sales Agent, Rail Joint Co., of Canada. 606 McGill Building, Montreal, P.Q.
Lathrop. C. B., Manager of Sales. Franklin Railway Supply Co., 625 Transportation Building, Montreal. P.Q.
Lawrence. E. A., Draughtsman, Canadian Pacific Railway, Room 1100 Windsor tSation, Montreal, P.Q.
Main, G. J., Car Service Agent, Canadian Pacific Railway, Montreal. P. Q.
Marchand. L. N., The Garlock Packing Co., 409 Shaughnessy Building. Montreal, P.Q.
Morris. A., Engineer. Grand Trunk Railway, 3037 St. James St., Montreal, P.Q.
Morrison, W. W. Draughtsman, Canadian Pacific Railway, Angus Shops. 1053 Davidson St., Montreal. P.Q.
Muir. J. D., Assistant Works Manager. Canadian Pacific Railway. Angus Shops, Montreal. P. Q.
McGill. W. E., Assistant Superintendent. Montreal Terminals. Canadian Pacific Railway, Montreal. P.Q.
Peckett, R. P., Jr., Service Representative. Franklin Supply Co., 625 Transportation Building, Montreal. P. Q.
Pierpont. F H., Yard Agent, Canadian Pacific Railway. Montreal. P.Q.
Pomeroy, E. N., Electrician, Canadian Pacific Railway. Angus Shops, Montreal. P.Q.
Robinson, Wm., Locomotive Engineer, Canadian Pacific Railway, Angus Shops, Montreal, P.Q.
Ross. J. T., Sales Dept., Taylor and Arnold. Engr. Dept., 260 St. James St., Monteal. P.Q.
Spargo, R. J., Electrical Inspector. Canadian Pacific Railway. 728 St. Hubert St., Montreal. P.Q.

Tirbutt, A. M., Vice Pres., Tayor & Arnold Engr. Co., 260 St. James St., Montreal.
Zehner, J. M., General Supply Co., of Canada, 407 McGill Building, Montreal, P.Q.,

Chairman:
Gentlemen, you have heard the list of applications. A motion that these applicants be admitted to membership in the club is now in order.

Mr. E. A. Cunningham:
I have much pleasure in moving that these gentlemen be admitted to membership in the club.

Mr. F. A. Purdy:
I second that.

Chairman:
It has been duly moved and seconded that these applications be received. All in favor please signify in the usual way.
Carried.

Chairman:
At the last meeting of the club, I advised that there would probably be an announcement made at this meeting regarding our annual banquet. This bansuet will be held on Saturday evening, January 29th, in the Rose Room of the Windsor Hotel here, commencing at seven o'clock. Tickets for the banquet will be the same price as last year, $3.00 each, and these tickets can be obtained from any member of the Executive Committee or from any member of the Entertainment Committee. The Executive Committee is composed of Messrs. C. H. N. Connell, W. H. Sample, A. Crumpton, R. A. Pyne, C. P. Price, E. R. Battley, B. F. Shortley and H. R. Nayor, also Mr. E. E. Lloyd, Treasurer and Mr. W. A. Booth, Secretary. The Entertainment Committee is composed of Messrs. Kingsland, N. Holland, A. Allan and W. H. Robb.
I would further call attention to the little slip which has been posted on the cover of the proceedings which are being mailed to you stating that those who wish to reserve tables can do so by making their wishes known to the Secretary.
In connection with speakers for the evening, I might

announce that an invitation has been extended to the Hon. W. H. Taft to respond to a toast, and we are very hopeful that he will accept the invitation. The Hon. F. B. Carvell has accepted the invitation to respond to the toast of "The Railways." Dr. Stephen Leacock has accepted an invitation to respond to the toast of "Our Guests," and there will be one or two other speakers who will be announced later. In addition to this the Entertainment Committee have provided some first class entertainment, so that there will be some fun as well as some seriousness.

## MEMBERS PRESENT

Winterrowd, W. H.
Angus, R. F.
Arblaster, H. J
Baldwin, G. E.
Ashby, F. D.
Bannerman, W. H.
Bare, H. S.
Barber. D. J.
Barker, D. F.
Barratt, C. W.
Barton, A.
Battley, E. R.
Beardshaw, A.
Benger, F.
Bennett, W. H.
Bentley, Geo.
Berger, W. A.
Blaiklock, H. M.
Blaiklock, M. S.
Blumenthal, S.
Boughton, L.
Brady, C.
Brandon, J. D.
Britton, J. H.
Broaderip, M.
Brooks, P. A.
Brown, B.
Bryson, Wm.
Buckland, A. W.
Buckland, J. W.
Buckle, W. E.
Campbell, D.
Campbell, M. M.
Candlin, A. J.
Carter, J. W.
Cartwright, H. V.
Chenery, W. H.
Clark, H. A.
Clibbon,, A. H.
Clibbon, A. T.
Coates, R.
Collins, T.
Comely, W. S.
Cowap, W.
Craigie, J. H.
Crockett, W. B.
Crumpton, A.
Crutchlow, Geo.
Cunningham, E. A.
Culkin, R.
Curry, C. R.
Desparois, J. D.
Dick, T.
Dickenson, T. E.
Dietrich, W. N.
Dixon, G. B.
Doherty, A.
Donald, T. F.
Dow, W. J.
Dunn, G. W.
Dutton, W. B.
Eddison, E.
Ferguson, J. P.
Ferguson, T.
Fesmer, E.
Fielding, W. G.
Foley, E. L.
Fradd, F. J.
Gillmor, W. D.
Goldstraw, W.
Gordon, S.
Gregory, W. A.
Grimes, R.
Hall, R. E.
Hagar, J. L.
Hamm, W.C.
Hassell, C.
Hayden, J. E.
Hannaford, R. M.
Hanson, P. R.
Harrison, E. V.
Horwood, W. W.
Hebert, C.
Hendry, J.
Hervey, C., L.
Hillman, D.
Holland, J. A.
Holland, N.
Hope, J. A.
Ireson,, A.
Jackson, T. F.
Jackson, F. C.
Jarman, T. S.
Johnson, R.
Jones, R.
Kastella, A.

Kendall, A. H.
Kendall, Geo.
Kennedy, R.
Kenny, J. P.
Kingsland, E.
King, A.
King, A.
Kinnear, D. M.
Kurfess, L. S.
Lachance, A
Lecavilier, A.
Leclerc, J. R.
Linagh, R. K.
Long, R. A.
Lowe, W. S.
Luscombe, H.
Mackie, R . L. D.
Macnab, E. S. M.
Main, H. J.
Marchant, A.
Martyn,, C. A.
Millar, W.
Mimms, A. E.
Moore, F. W.
Moore, T. H.
Morrison, Wm.
Moquin, H.
Munro, J. D.
Musgrove, G. W.
McArthur, F.
McCuaig, J. D.
McCuaig, G.
McCaig, G.
MacDonald, A.
McGill, W. E.
McLachlan, J.
McLaughlin, G. P.
McVeigh, E. J.
McVicar, R.
Naylor, H. R.
Newman, W. A.
O'Brien, E. G.
Oshmera, J. F.
Palmer, L.
Palme, J. E.
Parks, G E.
Parsons, H. J.
Paxton, J. D.
Pepler, H. A.
Peterson, W. A.
Peverley, R. D.
Phillips, F.
Pierpont, F. H.
Powell, J.
Primeau, J. L.
Prowse, Wm.
Purdy, F. A.
Rees. G. J.
Reynolds, P.
Riddington, A.
Robb, J. D.
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Robins, G. K.
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Smith, E. D.
Snook, R.
Spargo, R J.
Spence, Wm.
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Viberg, E. R.
Yost, W H.
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and others.

Chairman:

The subject of our paper for this evening is, Operating Broad Gauge Railways in France, Under War Conditions, by Capt. A. H. Kendall, M.C.O.C., 58th Broad Gauge Operating Company, C.E.F., and who is now Master Mechanic of the Canadian Pacific Railway at Montreal. I do not think that Captain Kendall needs any introduction to you. I will ask him to read his paper.

## OPERATING BROAD GAUGE RAILWAYS IN FRANCE UNDER WAR CONDITIONS.

In preparing this paper the only records available are those of my diary, which though correct, are too meagre for the purpose.

Realizing that the general interest in the past war is fast decreasing, and having in mind that fact that it is not good to refresh unpleasant memories, I will try to avoid anything which does not apply to operating Standard (Broad) Gauge Railways under War conditions in France, and endeavour to give you an outline of the experiences we had, as well as the various ways and means adopted, which differ generally from railway operation under peace conditions. Were it not for the fact that I was in command of the only Canadian Railway Unit assigned to operate standard gauge railways in France, I would not attempt to do so.

The first orders received from the Mobilization Department were to the effect that locomotive engineers, firemen, station masters, controllers, guards, blockmen, shunters and mechanics were required, and that a unit of three officers and 266 men should be recruited to operate a portion of the railway lines in France for the British Armies, also that the unit was required urgently. It was, therefore, decided that no time should be lost in waiting for a mobilization table, which was not then available. When one thinks of operating a division or a hundred miles or so of a busy railway in peace times and considers the numbers of the various classes of employees necessary, one naturally wonders how so small a unit could be distributed to advantage without a careful study of the capabilities of each man. This, therefore, was the first difficulty that presented itself at recruiting. Knowing from experience that the average engineer on a Canadian railway makes a good firemen, engineers were recruited for use as engineers and firemen; similarly conductors were recruited as yardmasters, guards and shunters; train despatchers and operators for blockmen, station masters and train controllers. Some boilermakers and machinists were also included. The addition of a Headquarters Staff who were familiar with railway working completed the organization. It might here be said that the railways of Canada were well represented, and that all the men were truly representative of the various railways in resourcefulness and efficiency.

During a short training in England various classes on railway work were set up, and the officers were enabled through

close contact with the men to make their choice of those most suitable to carry on as non-commissioned officers. The qualifications of each man for railway work were hardly known at this time, except by observation and through some recommendations received from officers of home railways. It was found that those who most whole-heartedly entered into the performance of the lesser and seemingly unimportant duties before getting down to actual service were with few exceptions able to carry on satisfactorily in their own line of work when needed.

After arrival at the Base Depot of the Railway Operating ivision, R. E., it was soon obvious that the intention was to break the unit up for distribution amongst other Royal Engineering units which were then being mobilized for immediate service. After referring, however, to our mobilization table, and taking into consideration the service given by some of the personnel who had been used for a short time in back area railway work, it was decided that the unit could be used to advantage to take over for operation a section of the line. We were then able to become more familiar with the inside working of the transportation services and found them to be organized as follows:—

### General Headquarters.

The Director General of Transportation of the British Armies in France and Belgium was the head of the whole transportation organization. The heads of his departments were: the Director of Inland Water Transport, the Director of Roads, the Director of Railway Traffic, the Director of Light Railways, the Director of Railway Construction, the Chief Mechanical Engineer, the Officer Commanding Canadian Railway Troops, and the Officer Commanding Railway Operating Division.

### R. O. D. Headquarters.

This headquarters, to which we were attached for duty, was accommodated in a train, and moved from one area to another as the requirements demanded. The O. C. R. O. D., R. E., was General Manager of the British Army standard gauge railway lines. All Imperial reinforcements, locomotives, locomotive stores, coal, etc., were supplied by these headquarters, and nearly all transportation and other reports were forwarded to them.

## C. R. T. Headquarters.

The Corps of Canadian Railway Troops, to which we were attached for administration, was composed of about fourteen battalions of construction troops, one Engine Crew Company, one Wagon Erecting Company, one Light Railway Operating Company, and one Standard Gauge Operating Company.

## Army Headquarters.

The Director General of Transportation was represented at the headquarters of each of the Five Armies by an Assistant Director General of Transportation (A. D. G. T.), and all the various units of the transportation services assigned for duty with an army were subject to his instructions for work requirements. The Standard Gauge Railway Organization, under the A. D. G. T., was composed of a Railway Construction Unit, a Railway Traffic Unit, and a Railway Operating Unit, the commanding officers of each being known as the R. C. E., A. D. R. T. and the O. C. R. O. D. The strength of each of these units was dependent entirely upon army requirements.

The R. C. E. was responsible for the construction and maintenance of right of way, track, bridges, water systems, telephones, telegraph, and other signal equipment.

The A. D. R. T. supervised the timing of trains, the distribution of supplies, and arranged for the personnel to load and unload trains, and any other duties that arose incidental to traffic.

The O. C. R. O. D. was responsible for all train handling, and the ordinary running repairs of rolling stock. The general repairs to rolling stock were taken care of in the back area under the C. M. E. in the various repair shops turned over by the French civil railways for the purpose, until suitable shops could be constructed by the British armies.

When assigned to an army, the work requirements were made known by the A. D. G. T. at regular periodical meetings, usually held monthly, but in times of contingency they were held weekly. At these meetings the heads of all transportation units were present, as well as a representative of the Army Quartermaster General, who made known the requirements of the army for the immediate future. These requirements were then discussed, considered in detail and arrangements made for increased yard facilities, new railway lines, sidings, roads, rolling stock, supplies, telephone lines etc., and at the adjournment there was no room for any misunderstanding as to what

should be done by each unit during the next period. It was then necessary to arrange with our various headquarters for any reinforcements necessary in personnel, equipment or supplies to enable us to meet these requirements.

## R. O. D. Organization.

At th commencement of the war in France we are given to understand that there was only one Railway Operating Company of about 300 men available, while at the signing of the Armistice this one company had expanded to the dimensions of a whole division. The first units were naturally used from a given Army Exchange point, where all trains were turned over to them by the French railways, and from that point they were worked forward by the R. O. D. to the railheads where delivery was taken by the army by other means of transport such as mules, motor trucks, light railways or trench tramways. this final delivery being dependent largely on the formation of the land in the area of distribution, and how far forward the standard gauge railways could be constructed and maintained for service.

These exchange stations and railheads gradually grew in numbers in proportion to the extent of the front line taken over by our armies, and they were always far enough forward so that there was very little if any civil traffic beyond. The French civil railways controlled and operated all lines behind exchange stations. The exchange stations and all lines forward were operated by the R. O. D., and maintained by the R. C. E.

As the strength of the armies increased the material requirements also increased, and congestion in the back areas on lines operated by the French railways was soon acute, and at times while army corps in one area were well provided for, others were handicapped because of shortage, and generally the deliveries at exchange stations were too erratic to efficiently meet the requirements. Because of the army requirements and French civil traffic the French railways behind the British lines and back to the coast were overtaxed, and as time wore on the needs of the French armies for personnel made a heavy drain on the railway men, with the result that little by little all the lines behind the British armies had to be supplemented by British personnel.

Supplies and other material for the British armies arrived in France at several ports, and while railway transport officers were assigned to each port to look after the transhipment into railway wagons as well as distribution, it was extremely diffi-

cult to marshall trains and get them up to the army exchange stations with reasonable despatch without most careful routing to avoid congestion.

It was, therefore, very necessary that the R. O. D. arrange for some system of keeping a close watch on the movement of trains over the French lines, and which were destined to the army exchange stations. A system was gradually built up whereby the despatch and movement of trains for the British armies could be controlled in such a way to meet the needs of the individual armies, and without prejudice to the general working of the railways which had to serve the civilian population between the army and the coast, in addition to the whole combination of armies.

Between the originating point of the train (despatching station) and the exchange stations in the army area, reporting stations were established at suitable distances and connected by telephone to both the despatching station and exchange stations. These stations reported the passage of each train to both the despatching station and exchange station.

The first thing necessary was for the reporting station to be readily able to distinguish one train from another and to get certain necessary information about them before they arrived and as it was not desirable to have more marking on the train than necessary the following system was adopted for reporting:—

A—Havre.
B—Rouen.
C—Dieppe.
D—Abbeville.
E—Etaples.
F—Boulogne.
G—Calais.
H—Dunkirk, etc.

All the various ports or other despatching stations were given distinguishing letters from A to V.

The despatching stations arranged to label their trains as soon as they were marshalled with numbers that carried three indication letters:—

(1) The number of the train despatched from the station since midnight.
(2) The code letter of the despatching station.
(3) The number of the day of the month.

Thus: 1 A 12 would indicate the first train despatched from Havre on the 12th day of the month. The date was necessary

so that trains of one day would not be mistaken for the train with the same number of another.

These symbols were sufficient to enable reporting stations to recognize any army train, and they were placed on both sides of the last car on the train.

These markings, however, required supplementing so that the nature of the contents of the waggons could be known by the various exchange points for shunting purposes, therefore the principal classes of traffic carried were given a code letter, thus:—

B M—Railway material.
H—Remounts.
S—Supplies.
X—Ammunition.
Z D—Ordnance, etc.

These code letters were issued by the Director of Railway Traffic as required to the despatching and reporting stations, and each car carried its symbol letter posted in a conspicuous place. These letters were not used for reporting at the reporting stations except in special cases, because the despatching station made report of the exact contents of each train as soon as it was marshalled.

In addition to this, the only other requirement was to know the destination of the train and the number of waggons in its make up. This information was phoned from the despatching station to the reporting station and on to the army exchange station concerned.

The numbers of the reporting stations soon increased to such an extent that they had to be grouped in areas under a control office. As the exchange stations were also grouped for the various armies, a table of these groups wa skept in the control offices so that the controllers could direct the routing of all trains for the different areas.

The despatching stations recorded and reported the formation, number and the leaving time of trains to the control office and to the first reporting station, and the reporting stations kept record of the passage of the train and reported same to the next reporting station and to the control station so that the position of the train and all other information necessary was known by the control office, and although the operation of the train was left in the hands of the French railways the R. O. D. was generally in a position through Laison Officers to control their movements and to apply whatever remedy might be necessary to prevent unnecessary delay.

The control stations gave the Army Exchange Stations a

line up twice daily of the trains to be expected and an approximate time or arrival, while the reporting station nearest the exchange station gave the passing time at that point so that the exchange station was in a position to make their arrangements for handling them forward.

Particulars of train movements from the Army Exchange Stations forward to the various railheads was given by the operating officer to the R. T. O. assigned to the station. He would in turn arrange through his department for the necessary personnel from the armies concerned to unload the trains on their arrival at railheads, without delay to train or undue waste of time to the unloading party.

Interpreters were on the staffs of all exchange stations so that French officials could be kept in touch with the time of the return of empties.

In addition to installing this system of following up our trains over the Nord System it became necessary because of personnel and motive power shortage on the Nord Railway, to qualify our engine men to run R. O. D. engines over the Nord. Therefore, we were supplied with the necessary rule books covering operation and signalling, and all enginemen who were used for this purpose had to qualify before a Board of Examiners for the Nord Railway. Later practically all British army trains were handled by R. O. D. engines and crews from the despatching stations to the railheads. The Nord supplied one guard for each train while operating over their line up to the exchange station.

As the numbers of the R. O. D. locomotives supplied on Nord lines increased the Nord would turn over their enginehouses and these in turn would be manned by R. O. D. personnel, who would take care of the maintenance and despatch of the locomotives and the supplying of crews, but as soon as engines were over the turn tables they were under the control of the Nord officials until they reached the army exchange station. From the exchange station forward only R. O. D. personnel was used for all operating purposes.

In the forward areas, or lines operated entirely by the R. O. D. a rule book was drawn up to meet the requirements of operating and signalling. As Fixed signals were invariably destroyed by the retreating army, and generally it was not the policy of the British army to re-instal them. The working, therefore, was wholly taken care of by the telephone and the block to block system. Telephone lines were carried on poles up to the point where they could be maintained, and then by cable laid along the right of way. These block stations, which

were portable huts, varied in distance in accordance with the density of traffic on single or double track, but were usually placed ten minutes apart, and at railheads where business was heavy, one was placed at each end of the yard. Where it was not considered possible to maintain huts as mentioned, telephones were put in dugouts. These block stations were grouped under a controller, known here as a despatcher. So far as possible his assignment of block stations were connected so that he could get one or all on the phone together. The various control stations were connected by telephone with the chief control office at the headquarters of the unit, so that the Chief Operating Officer was in a position to know the exact movement of all trains in his area. Railheads were located at points most suitable for the distribution requirements of the armies, and dependent greatly on road conditions and their capacity for traffic. The principal classes of traffic carried were: supplies, ammunition, ordnance, reinforcements, remounts, R. E. stores, stone, railway material, coal, ambulance trains and leave trains. It will be seen that one railhead for all this traffic would not be practicable, particularly as supplies, railway material and ammunition were usually delivered much further forward than ambulance trains, coal, reinforcements, etc., besides one Army Exchange Station or one unit would usually supply several army corps, and each of these required its own railheads. The station staffs at railheads were therefore arranged for in accordance with the volume of work, and all were accountable to a stationmaster.

Most of the men worked twelve hour shifts, and living accommodation was provided in huts when possible. Where over ten men were located at one place a camp staff was provided to look after their feeding arrangements and other requirements. At every point the senior man in rank was responsible for the conduct and discipline of the others.

## Organization and Work of the 58th Broad Gauge Operating Company (Canadians).

On June 1st, 1917, the unit proceeded to Merris, a newly constructed British Railway Depot, about 200 yards west of Strazeele (Nord) station, with R. E. reinforcements, fifteen locomotives, three Merryweather pumps, an emergency stores, a tool van and a small supply of coal. The preparations by the Second Army for the Messines offensive were under way at the time, and the unit was, therefore, well initiated into rail-

way operation under active service conditions from the first day.

In the Second Army area we took over the control and operation of the double line from Hazebrouk to Armentieres and the network of single lines in the Messines sector; in the First Army area we took over the single line from Berguette through Merville to Armentieres, and the single line from Hazebrouck to Merville.

On arrival at Merris we found a railway yard of sixteen

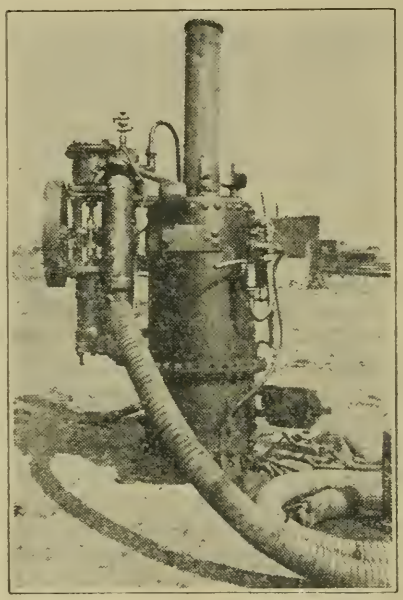


Fig. 1.

sidings, eight on each side of the double main lone, and a Wye off the south yard. Off the south leg of the Wye were three parallel sidings. Two of them were 14 ft. centres and the third 20 ft. These three sidings were used as a locomotive depot, or locomotive despatch station. There were no shelters or other facilities available. Alongside these tracks was an irrigation ditch with about 2 feet of water, full of vegetable matter, from which our water supply was obtained by means of Merryweather pumps. Merris was developed into a headquarters exchange and locomotive depot. Sub-depots were later estab-

lished at Bailleul, Steenwerck and Berguette. The latter station had previously been used by the Nord Railway as a divisional point, and it was, therefore, only necessary for the British army to improve the water and track facilities to meet their requirements.

In developing the locomotive depot at Merris two 150 ft. concrete pits were put in at the end of the two sidings mentioned above. The sidings were extended, and over the pits we erected a sheet iron shelter so that when necessary to make

repairs at night lights could be used without being observed by hostile aircraft. Another shelter made of the same material was erected close by for use as a machine shop. A 50 Kw. electric generator was obtained and used for supplying light for the depot; switches were placed so that all exposed lights could be turned out during night raids.

A washout pit was constructed. Engines were washed out every ten days and for this purpose a Merryweather pump, as shown in figure 1, was used. It might be said here that this little pump was one of the best friends of a railway man in France, for at times we were put to great inconvenience on account of failures of water supply. These pumps were made

in two sizes of 5,000 and 10,000 gals. capacity per hour. In addition to the pumps in constant use we had several others in stock for use on the line in cases of emergency.

Water tanks were erected, as shown in the accompanying photograph. These tanks were filled by Merryweather pumps

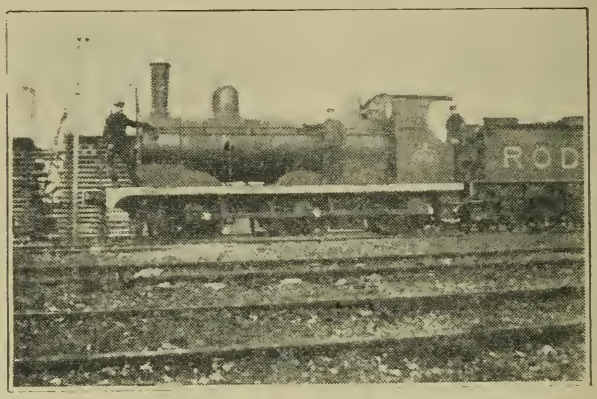


Fig. 2.

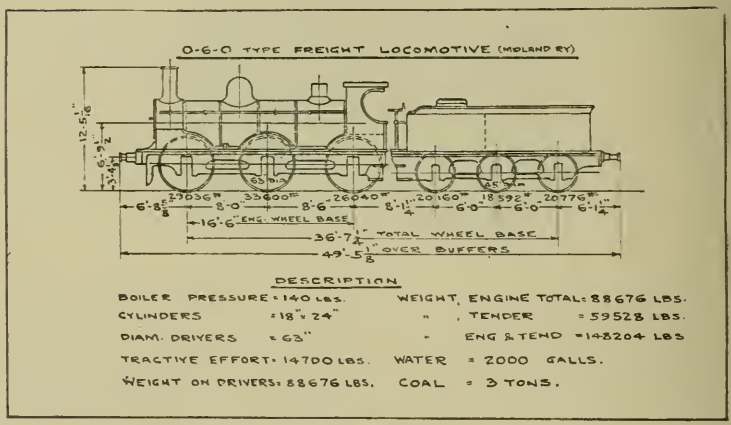

0-6-0 TYPE FREIGHT LOCOMOTIVE (MIDLAND RY)
DESCRIPTION
BOILER PRESSURE = 140 LBS.
CYLINDERS = 18" x 24"
DIAM. DRIVERS = 63"
TRACTIVE EFFORT = 14700 LBS.
WEIGHT ON DRIVERS = 88676 LBS.
WEIGHT, ENGINE TOTAL = 88676 LBS.
" , TENDER = 59528 LBS.
" ENG & TEND = 148204 LBS
WATER = 2000 GALLS.
COAL = 3 TONS.

Fig. 3.

until such time as more permanent arrangements could be made. At Merris we later obtained a plentiful supply of very dirty water from the canal at Hazebrouck, a distance of five miles away. Oil burning pumps were installed at the canal and the water was forced through a ten inch pipe line, which

also had to be installed. At Merris a hole was dug in the ground and lined with canvas well tarred to hold a supply of 150,000 gals., for use in case of emergency. This reservoir was filled by the overflow from the tanks.

The locomotives supplied for work in this area varied in type, and the accompanying illustrations show the general dimensions of four of them. The 0-6-0 Midland railway engine, figures 2 and 3, was the type supplied when we first started operations. Of the fifteen engines of this type assigned to us several railways were, however, represented. Some of the engines originally belonged to the London and Northwestern Railway, the Great Central Railway, the Great

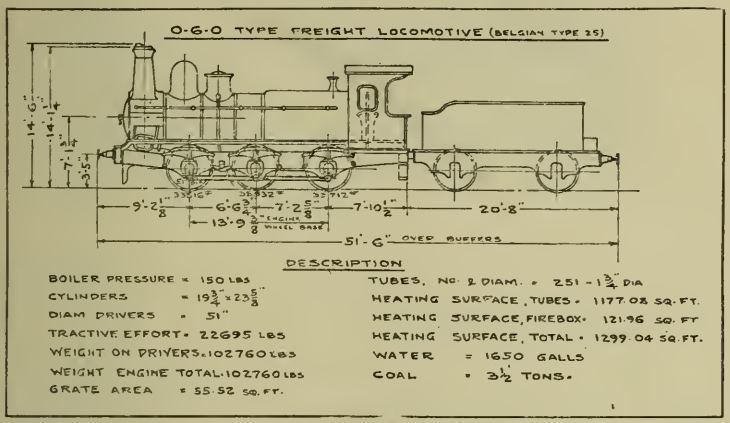

0-6-0 TYPE FREIGHT LOCOMOTIVE (BELGIAN TYPE 25)
9'-2 1/8"
6'-6 3/4"
7'-2 5/8"
7'-10 1/2"
20'-8"
13'-9 3/8" COUPLED WHEEL BASE
51'-6" OVER BUFFERS
DESCRIPTION
BOILER PRESSURE = 150 LBS
CYLINDERS = 19 3/4" x 23 5/8"
DIAM DRIVERS = 51"
TRACTIVE EFFORT = 22695 LBS
WEIGHT ON DRIVERS = 102760 LBS
WEIGHT ENGINE TOTAL = 102760 LBS
GRATE AREA = 55.52 SQ. FT.
TUBES, NO. & DIAM. = 251 - 1 3/4" DIA
HEATING SURFACE, TUBES = 1177.08 SQ. FT.
HEATING SURFACE, FIREBOX = 121.96 SQ. FT
HEATING SURFACE, TOTAL = 1299.04 SQ. FT.
WATER = 1650 GALLS
COAL = 3 1/2 TONS.

Fig. 4.

Eastern Railway, the Caledonian Railway, etc., but they were very much alike. All these engines had slab frames and were inside connected. They had white metal bearings throughout and a spring oiler was used in the tender boxes and dope in the main boxes. Wool waste could not at times be procured and as a substitute we used hemp rope, stripped, bound in stacks and stood on end. This was only a fair substitute but it met requirements. The tubes and fire box sheets were mostly made of copper and when the boiler was kept clean they gave very little trouble. The chief maintenance repairs were driving boxes, side rods and springs. Prepared white metal was kept in stock ready to be melted for all bearings. At times it was most difficult to obtain the necessary repair parts and we occasionally had to run engines with one or more springs missing, with the engine blocked up on hard wood. The

springs on this type of engine were separately hung and readily adjusted by tightening or loosening the nuts on each hanger.

The brake equipment was either steam or vacuum. We had, however, several Belgian engines 0-6-0, type 25, as illus-

Fig. 5.

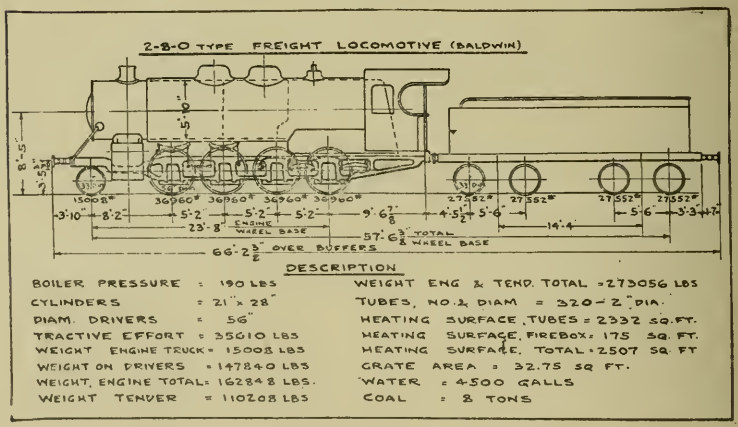

2-8-0 TYPE FREIGHT LOCOMOTIVE (BALDWIN)
DESCRIPTION
BOILER PRESSURE = 190 LBS
CYLINDERS = 21" x 28"
DIAM. DRIVERS = 56"
TRACTIVE EFFORT = 35010 LBS
WEIGHT ENGINE TRUCK = 15008 LBS
WEIGHT ON DRIVERS = 147840 LBS
WEIGHT, ENGINE TOTAL = 162848 LBS.
WEIGHT TENDER = 110208 LBS
WEIGHT ENG & TEND. TOTAL = 273056 LBS
TUBES, NO. 2 DIAM = 320 - 2" DIA.
HEATING SURFACE, TUBES = 2332 SQ. FT.
HEATING SURFACE, FIREBOX = 175 SQ. FT.
HEATING SURFACE, TOTAL = 2507 SQ. FT
GRATE AREA = 32.75 SQ FT.
WATER = 4500 GALLS
COAL = 8 TONS

Fig. 6.

trated in figure 4, with no braking power whatever on the engine and only hand brakes on the tender. The brake shoes on the tender were made of wood. Another Belgian engine we had was the type 32, dimensions of which I have not available. This engine was equipped with Westinghouse air brake and was

used for personnel and ambulance trains. The 2-8-0 Baldwins, and Canadian built engines shown in figures 5 and 6 superceded the above mentioned classes of engines for handling through traffic. The 2-6-2 Baldwin engines, illustrated in figures 7 and 8, were used for short runs and as all these were delivered new

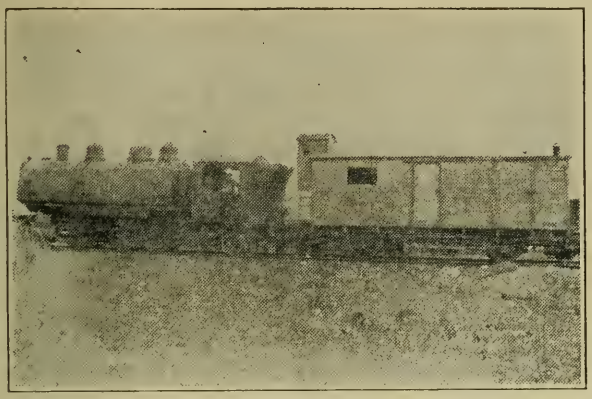


Fig. 7.

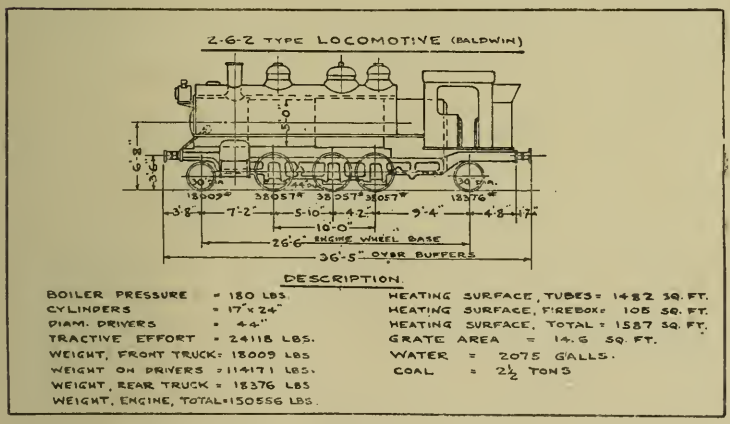



Fig. 8.

the maintenance was not heavy. Engines were never killed except for boiler or grate repairs, but were kept constantly under steam for use on short notice. Where possible engines were double crewed, but when traffic was very heavy and men were scarce, all were pooled.

As previously stated, Merris Exchange Yard consisted of sixteen sidings, which were 1,400 feet long. The chief control, or despatching station, was located here, and telephone communication established with all stations, the Nord Railway and the Army Signal Systems.

When a train left the despatching station, Boulogne for example, Merris exchange was advised of the number, the consist and leaving time. Passing reports were also received from the reporting stations on Nord lines. On arrival of train at Merris the despatching station engine was taken off, sent to the loco depot, and made ready for the return trip. The crew was given eight hours rest, when possible, a hot meal and twenty-four hours rations before making the return trip. In the meantime the train was marshalled in the yard according to requirements. The R. T. O. was notified of the leaving time, and probable arrival times at the various railheads, and he arranged for men to unload it.

To overcome the absence of power brakes on cars, trains had to be made up with a brake van on each end, and sufficient cars with hand brakes properly spaced throughout the train to provide the necessary braking power. A small white light was placed below the buffer beam on the front of the engine, and one red light on the rear of the train. The train crew consisted of a conductor and one or more brakemen. The conductor rode in the head end brake van, and the brakeman in the rear. The engineer, not the conductor, was primarily responsible for the train.

On Nord lines trains were handled on the automatic block system, and on R. O. D. lines on the station block system. The R. O. D. lines were divided into sections, and at each station, hand, or at night when possible, lamp signals were given to engineers in accordance with the prescribed rules. No engineer was permitted to proceed into a section until he was furnished with a train order, printed in French and English, indicating either that the section was clear or occupied. In the event of the section being occupied it was necessary for the engineer to proceed at "Caution" after signing the train order. The engineer's copy of train order was handed by him or his fireman to the station master or blockman at the end of the section to which it referred. It was permissable to run all trains at "Caution," with the exception of ambulance trains, which were always handled on the absolute station block.

When possible trains were run at regularly spaced intervals throughout the twenty-four hours, but at times because of

enemy artillery or bombing activities, traffic had to be suspended for a time, and then trains unavoidably fleeted. Although traffic for the front was of the first importance, the shortage of equipment made it necessary to avoid delay to return empties as much as possible. At 10.00 a.m on the first Sunday of every month a wagon census was taken. Forms printed in French were provided by the Nord Railway for the purpose of supplying the required information regarding all cars in transit and at stations. When this report was completed it was forwarded to the "Commission de Reseau du Chemin de Fer du Nord" at Paris, and a summary wired to R. O. D. headquarters.

Traffic was usually heavier at night, particularly forward of exchange stations, and because of the absence of lights and the frequency of shell holes and other track breaks caused by bombs the movement was somewhat slower than in the daytime. When these breaks in the track occurred telephone lines were usually torn down by the force of the explosion and communications cut with the stations beyond. In advanced areas the tracks were patrolled by track walkers, or, gasoline track motors (when available) were used ahead of trains, to report such accidents and minimize derailments. Notwithstanding all the precautions taken, however, an odd train on the block of another train, which had passed safely, would run into a shell hole without anyone being warned that the shell had landed. Engineers were sometimes required to take a train over new and unfamiliar lines, in the forward areas, without a pilot and on which they would discover heavy grades and sharp curves and on descending, would whistle for brakes and trust to luck to find their train still on the rails on the bottom. Some of the forward area grades were 2.5%, and unless the trains were marshalled with sufficient brake vans the result was obvious. The absence of lights on switch stands at stations, etc., made operation all the more difficult. It was often necessary to divert traffic from one line to another on account of the track being badly blown up in places.

In the extreme forward areas it was necessary to cover the cab with a large tarpaulin in order to baffle the light caused by the opening of the fire box door. In this service below Messines Ridge we had two engines equipped so that the exhaust could be turned back into the tender so that during periods of inactivity at the front we were able to get trains of ammunition up closer with a minimum of noise.

Locomotives were also used to stand by railway mounted guns, and in this area we had as many as eight, ranging from

9.2″ to 14″. When the larger guns went into action locomotives were used to spot them, after each shot was fired, also to move the guns to alternative positions in the event of their location being discovered by the return fire of the enemy.

The peak load of traffic handled in this area was reached during the week ending April 4th, 1918. The following loaded cars were handled: troops and remounts, 2,318; supplies, ordnance, ammunition and general traffic, 5,072; construction material, 29; ambulance, 254; French and Belgian civil traffic, 613; a total of 8,286. About 50% of these cars were hauled back empty.

Commencing about 4.00 a.m., April 9th, 1918, the area in which the unit was operating was subjected to enemy's shelling and bombing to an unusual degree. The railway and telephone lines were blown up continually, and some of the stations, as well as the control office at Merville, met a similar fate.

The handling of traffic on the first army lines, east of Berguette, was the first to be seriously interfered with, and by 7.00 a.m. numerous breaks in the track had been made as far back as St. Venant, and all telephone lines forward of that station had been put out of commission. Tracks and telephone lines were destroyed and repaired repeatedly. Gasoline track motor cars were used as a means of communication until the area was finally evacuated.

From May until August, 1918, the unit was assigned to operate construction trains on new lines being built between Etaples and Candas. These new lines were urgently required as nearly all the British arm lines operated by the R. O. D in the forward area had been destroyed by the enemy and were in their possession. In addition to operating these lines, we also had 15 2-8-0 Baldwins handling main line traffic out of Abbeville. In this area we were attached to the third army.

When the advance on the Somme got under way, we were advised by headquarters to get ready to move. We then went to the fourth army area and established headquarters at Chemin Vert. A British railway exchange yard just off the Amiens—St. Quentin—Nord main line at Weincourt. The advance in this area was, of course, very rapid, and upwards of 15,000 railway construction troops were used in this area to get the railways back into serviceable condition. Every rail had been put out of commission, bridges blown up, timber burned, deep fills mined and blown up, water systems destroyed, etc. Trains of supplies and ammunition were moved up the same day the rails were laid, even before the track had

been lined or surfaced. It will therefore be understood that there were some derailments, but there were plenty of men and material available to do the rerailing. If the equipment was off the track very badly and we did not have time to handle it, the equipment was moved clear of the track and traffic handled as usual until we could get the wrecking cranes into service without causing much delay to traffic. The lines out of Chemin Vert extended to Marcoing through Trones Wood and Le Transloy to Epehy and Peronne.

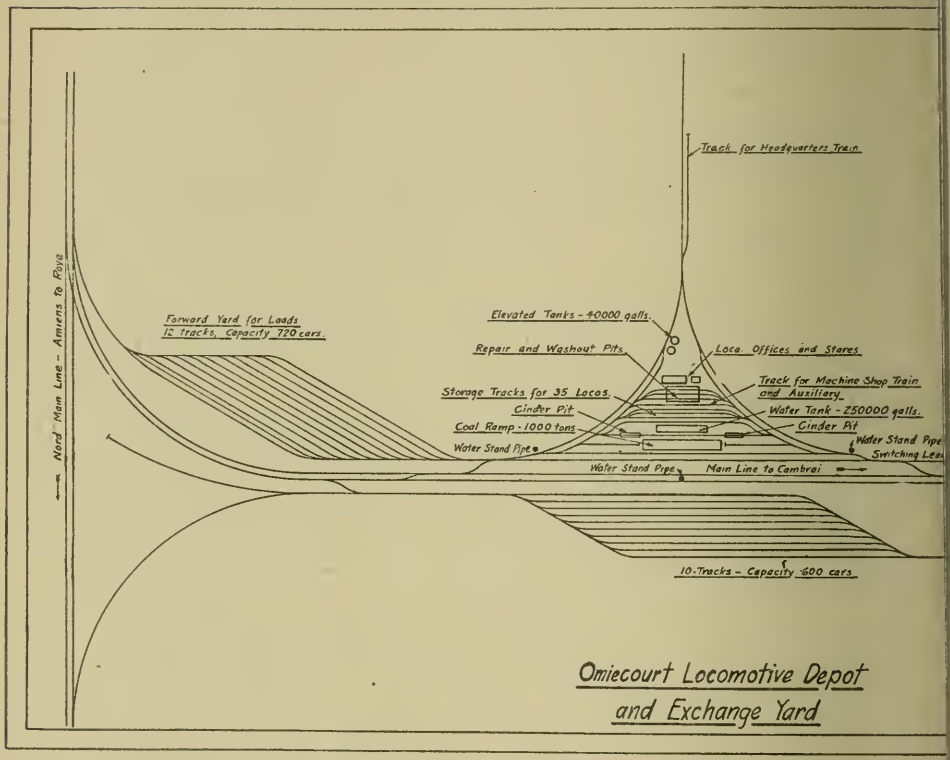
Until the Somme River was reached great difficulty was experienced at Chemin Vert, on account of lack of water. We procured two tank trains and had to send them to Amiens daily to be filled with water. Deep wells were sunk but the chalky formation of the soil, even when water was discovered, made it altogether unsuitable for use in locomotive boilers without first being given treatment. Pumps were later installed near Mericourt and a pipe line laid from the Somme River to Chemin Vert.

On account of the rapid forward movement of the army, it was necessary for us to send out additional detachments. The first one was sent to Omiecourt, near Chaulnes. The main local depot and exchange yard were built at Omiecourt, just off the Nord main line. The line from Amiens to Chaulnes was left for operation by th Nord railway. The lines built by the railway troops in this area and taken over for operation by us extended from Chaulnes, through Peronna, Cambrai to Valciennes. also the line south of Peronne to St. Quentin, together with all British army lines in this area east of the lines mentioned.

Omiecourt, plan of which is shown in figure 9, was developed as the main locomotive and exchange depot in this area. The facilities at Omiecourt consisted of an incoming and an outgoing yard with ten 1,800' sidings in one and 12 in the other, a coal ramp with a capacity of 1,000 tons, a concrete reserve water reservoir with a capacity of 250,000 gals., and two elecated 20,000 gals. tanks, as shown in figure 10. These tanks were filled by raising water from five deep wells. The locomotive depot was constructed so that 100 locomotives could be taken care of. The machine shop equipment was fitted up in large French steel brake vans and was readily transferred from one depot to another when required. The power was obtained from an electric generator run by gasoline engine. We also had a 35-ton steam crane, which was the largest one in use. The heaviest traffic was handled through this yard week ending October 3rd, 1919,

made up of the following cars: troops and remounts, 2,490; supplies, ordnance, ammunition and general traffic, 9,921; construction material, 884; ambulance, 1,605; a total of 14,900 loaded cars.

One of the drawbacks to the prompt handling of traffic in this area was the explosion of numerous delay action mines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Cinder Pit
Water Tank - 250000 galls.
Coal Ramp - 1000 tons
Cinder Pit
Water Stand Pipe
Water Stand Pipe
Switching Lea
Water Stand Pipe
Main Line to Cambrai
10 Tracks - Capacity 600 cars
Nord Main Line - Amiens To Paris
Omiecourt Locomotive Depot
and Exchange Yard

Fig. 9.

placed in embainkments by the enemy when retreating. Although they had destroyed the steel and ties they also mined nearly every fill of any size, as well as many junction points, diamond crossing locations and bridges. Even when bridges were blown by them other delay action mines were left to blow the new bridge which they knew would inevitably be constructed. There were various types of mines but they all had

the acid timing arrangement. Some of the mines were discovered and dug out; the rest of them exploded at various times, causing more or less inconvenience. One of the biggest mines blew up the double main line near Marchelpot as late as January, 1919. When the armistice was signed, the Germans handed over their maps showing the location of all mines, but it was found that the German engineers who planted them, had in many cases, varied from the map location as they apparently found it easier to place them elsewhere. Taking into consideration, however, the large number of mines placed, the unit was fortunate in only having had three locomotives wrecked through delay action mine explosions.

On account of the rapidity with which the unit was taking over lines for operation in this area, the headquarters of the unit was made mobile and accommodated in a train of German box cars and British brake vans. The lines were divided into three sections with headquarters at Chemin Vert, Omiecourt and Cambrai, and the officer in charge of each detachment reported to unit headquarters.

The chief control officer was later moved from Omiecourt to Cambrai. Cambrai Ville and Cambrai Annex Yards were repaired sufficiently to meet requirements. In addition to the regular traffic in this area we also had fifteen 2-8-0 Baldwin locomotives in service between Cambrai and Germany. These engines were double crewed, and had a brake van attached fitted up as living quarters. They were away from their home depot from seven to ten days.

At the signing of the Armistice the strength of the unit was 17 officers and 1,567 other ranks, in addition to several hundred Chinese coolies and German prisoners for shovelling coal, cinders and other ordinary work. We had 101 locomotives in service at this time. On November 11th several ammunition trains which were in the exchange yards to be worked forward were ordered back to the base, and no more came forward. After the final evacuation of Casualty Clearing Stations ambulance trains were continued in service to move back French civilians who had been living in the occupied area, and who were otherwise unable to travel. These trains were also used to transport French and Belgian prisoners of war who were unable to travel in ordinary troop trains.

By January 1st, 1919, a start had been made to demobilize the Imperial troops attached to the unit, and to turn over the railway lines to the Nord Railway. All locomotives, supplies, and the remainder of the Imperial personnel was turned over

to other R. O. D. detachments, and the unit entrained for the base April 8th, 1919.

Chairman:

Gentlemen, the paper you have just heard is a condensed and most modest record of a wonderful work most efficiently and well done. It is work done by men under conditions which few of us can properly appreciate. Possibly some of the men who were with Captain Kendall are here tonight and if so we would be very glad to hear from them. I realize that few of us are in a position to discuss this paper, but there are some who may wish to ask questions, and I have no doubt the Captain will be only too glad to answer any question put to him.

There is one paragraph which impressed me very much. I think it is at the top of page 19. It says, "It was found that those who most whole-heartedly entered into the performance of the lesser and seemingly unimportant duties before getting down to actual service were with few exceptions able to carry on satisfactorily in their own line of work when needed."

Mr. Kendall's judgment of men is good, for is it not a fact that the most successful men have in most cases a very great capacity for detail and the ability to do small things well, and this reflects their general ability to do larger tasks.

Captain Kendall:

Of course there are many things which could not be put in this paper, but I thought that probably someone would sense the meaning of that particular paragraph We had not been recruiting very long before we found that the men would have to apply themselves to all sorts of work, such as cooking, mending shoes, and various other incidental duties, and when I wrote that paragraph, I had in mind the character of work that was assigned to different men, for instance, I found I had a road foreman of Engines as chief cook. A chief clerk to a general superintendent, was a call boy, but it was soon realized that the men who took up in a proper spirit the duties that were assigned to them at the start, were the best men. We never had any complaints. They would undertake to clean quarters or any other class of work they were called upon to do, and worked out to be the best men at the end of the game.

Chairman:

On page 32, Captain Kendall says that the lines were divided into sections, and at each station, hand, or at night when possible, lamp signals were given to the engineers in accordance with the prescribed rules. I believe Captain Kendall could give us some interesting information why lamp signals were not practicable at night.

Captain Kendall:

In this connection, there were certain times when we had, of course, to cut out all signals, for at times lamp signals at night were suicidal. The first experience we had was at Andricq. We had not been there very long when the bosh arrived and everyone had lights lit,—and we realized right away that we must not do that. On one other occasion, we had 88 cars of ammunition that were being switched at Bailleul. One of the cars was struck by a bomb and it resulted in the whole 88 being demolished,—so you can see how dangerous it was to use lights. On another occasion, an ambulance train was leaving a casualty clearance station when the Germans started bombing. Lights were being used that night on account of loading the wounded, and the result was that many at the station were killed or wounded.

In another case, on August 17th, we had a Lincoln Labor Company come to strike camp in our area and they were told what they should do about keeping lights out. They hesitated, and it was arranged for them to locate about half a mile away from our headquarters camp. They used lights at night, and the result was that the Germans dropped eight bombs which wounded about thirty men and killed about five. In addition to the saving of life, we also had to protect our equipment, but it was really suicidal to use lights at night.

Mr. Norman Holland:

Such a wonderful paper as this naturally does not call for any discussion. It is one of the finest papers we have ever had. Captain Kendall, in speaking of "lights" naturally turns my thoughts to the "lighter" side of life, and that is the only side I ever worry with. On page 22 he says: "The date was necessary so that a train of one day would not be mistaken for the train with the same number of another day."

That reminds me of an incident some years ago when one of our Canadian Railways—I will not say which one—was

operating through a certain town and a traveller made a bee-line to the station with the object of catching his train. He reached the station just 16 minutes before the train was due to leave, but it was pulling out and he just missed it. As this traveller had an important engagement to keep, his company took suit against the railway for permitting their train to leave the station ahead of its scheduled time. It looked as though the company would win the suit against the railway, but they lost.—the railway were able to prove that the train did not pull out 16 minutes ahead of time—it was the train of the day before,—laughter

A friend of mine, connected with the Baldwin Locomotive Works, was asisgned the duty of taking through the works, the daughter of one of the company's officials. This girl knew as much about a locomotive as the average woman. She saw a very large engine being built and asked the young man what it was. He said, "That's a locomotive boiler." She then asked, "Why do they have to boil the locomotive?" "Why," he said, "to make the locomotive tender." (Laughter.)

Chairman:

We have with us tonight a number of gentlemen, well known in Canada, who served during the late war. We would like very much to hear from some of them.

Brigadier-General C. L.Hervey, (Canadian Railway Troops):

Although I am not, unfortunately, a member of this club, I should like to say that I have enjoyed this paper very much. I served overseas for a little while and am in a position to judge some of the things that have been mentioned in this paper. I believe it is the most lucid and accurate paper I have yet heard in connection with the war. It is also very modest. I can speak for myself and a great many other people who served in France during the time this very efficient unit of Captain Kendall's was operating, and both the Canadian army and the British army have reason to be thankful to that unit for the efficient manner in which, during the summer and fall of 1918, they supported the lines. The entire success of the Canadian army in breaking the Hindenburg line depended upon it for supplies and transport. Captain Kendall's paper is a very lucid report and very instructive, and I want to take the opportunity to say that I had no idea of the difficulties the Railway Unit had to face until I heard

this paper tonight. We should all be thankful for the remarkably gallant way in which this company carried out its duties.

Mr. W. N. Dietrich, late C.S.M., 58th B.G., O.C.

Mr. Chairman and Gentlemen: I can confirm the statement made to the effect that the speaker of the evening is very modest in his history of what he and his unit accomplished overseas. Just to indicate to you how modest he has been, I will take the liberty of telling you of one of the things which he did.

The most important section of railway in the north of France for the use of the Allies is that connecting the sea ports of Calais and Boulonge with the cities of Bailleul and Armentieres. Before the Captain's arrival it was taking two days or 48 hours to handle shipments over this section. When he took it over and got things in working condition, the trains were operated on a seven and a half hour schedule and this was later reduced to seven hours and notwithstanding that the traffic was very dense. The total detentions for a week amounted to only a few minutes.

This improvement to the service was certainly a great help to the army of the Allies. If my memory serves me correctly, this is only one of the many conditions he greatly improved.

Lt.-Col. D. Hillman, D.S.O., (late officer commanding No. 5 Group Rly. Const. Coy's. R.E.)

I want to say something in appreciation of Capt. Kendall's paper. I am in a position to know something of the work he did as I was one of those fellows to whom he referred as R.C.E. and we worked together. Captain Kendall came into my area in June 1918, and there was a wonderful improvement in the handling of the traffic after he came there. The Imperial officers with whom I was dealing most of the time remarked on various occasions how the Canadians always got the stuff through. Captain Kendall was the man responsible for this and he was ably assisted by his officers, non-commissioned officers and men. He has been most modest in this write-up. The impression would be created, from the information given, that he had only a few hundred men, but, as a matter of fact, he had a couple of thousand men attached to him. The senior officers of the transportation organization certainly appreciated the work done by this Canadian Unit and I think Captain might read to us some of the letters of appreciation that he would no doubt has received from the

Director General of Transportation and the G.O.C. Railway Operating Division.

Chairman:

I am sure there must have been times when Capt. Kendall and his men had to do some emergency work to his locomotives or cars, and it would be interesting to know how he handled his equipment.

Captain Kendall:

I do not remember any particular hardship except one particular incident, when the Baldwin locomotives first came to us. The driving box brasses were brass but someone thought they should be white metal bearings and they were changed. We did not like this white metal, for as soon as it gets hot it is done for. When we sent an engine to the back shop in the back areas sometimes she was never returned, so that in some cases we undertook to do our own repairs on an engine that has burned up her driving brasses and put in new ones. It was a difficult job. We used a 35-ton crane and lifted the front end on to a dutchman and then took hold of the back end and lifted her high enough to get the wheels out. This was rather a crude method, but it suited the purpose.

Chairman:

May I ask how that exhaust was turned back into the tender in order to eliminate the noise?

Captain Kendall:

It is not by any means a practical device for general purposes. The artillery men wanted the ammunition taken right up to the guns and to prevent noise in moving the cars. A gate valve was put on the top of the exhaust pipe, which enabled us to turn the exhaust back into the tender. We were able to go about a mile before we would lose our steam, and it would be necessary to blow up again. It is not a practical device but can be used in an emergency. Sometimes it was quiet and we had to get up close without making any noise.

Comp.-Sgt. Major T. F. Jackson, 58th B.G.O.C.:

I was overseas with Captain Kendall, as Company Sergeant Major, and my duties were that of Locomotive Foreman, as well as being in charge of wrecking. There was a great deal of difficult work done which has not been brought out in the

paper just read. For instance, one of the first jobs undertaken was the rerailing of a 14" naval gun, which weighed nearly 200 tons, and which was badly off the track in Audrique yard. A party of Royal Engineers had been working at it for about two days, when our company was ordered to do it. We were able to get it on the track, and out of the way in just six hours, while at the same time we only had a 35-ton crane which would not move one end, but after getting the craneman, who was an R. E., to get up a full head of steam and keep it that way we were able to use it to assist in jacking up. The gun was nearly crosswise of the track, and we had to do a lot of skidding on rails, as there was no suitable wrecking tackle available.

Another time when the Germans were advancing in front of Armentieres we had our wrecking crane off the track on a 12° curve where there was only sand ballast. We had great difficulty in getting the crane rerailed, but although we had been ordered to evacuate, the captain would neither go nor let us go until we took the crane with us, and we eventually got it away.

We had all kinds of trouble maintaining engines because it was hard to get repair parts, and we were constantly up against it for water. While we started with no machinery we eventually found enough in the evacuated areast to meet requirements.

At a place called Chemin Vert, where we started to build a depot when the last Somme push was on, we did not need to build a reservoir for washing out because we used a large shell hole that was kept full of water by the rain for the job.

I have told a fitter to go and put a brake shoe on one of the English engines, and he would start out to do it with an axe, a saw and brace and bit, as they were made of wood.

We found old sweaters and socks used in journal boxes instead of wool waste; we managed, however, to get alone someway or other.

Lieut.-Col. P. R. Hanson, (late 14th Bat. C.E.F.) :

I cannot allow this paper to pass without expressing the appreciation of the branch of service I was connected with,—the infantry. This paper, so ably given tonight, is, as General Hervey says, the best document on the history of the war that we have had an opportunity to read. The services rendered by the railway men can be better understood when you consider the conditions under which they had to

work, and what their operations meant to the infantry,—the men in the trenches and up in the firing line. It has just dawned on me tonight what stupendous work these railway men had to do,—how easily everything was carried to us, how the ammunition and rations came along regularly including the rum, the letters from home, and how the boys who had been knocked out were quickly transported back by light railway to ambulance trains. I take off my hat and offer sincere thanks to these railway men who handled us so well. One gentleman here spoke about the time it took to handle goods from Boulonge to Armentieres, which time was reduced to seven and a half hours. In the beginning it took us 36 hours. I can assure you their work was appreciated by all who served in the army, and I wish to move a very hearty vote of thanks to Captain Kendall for his paper which gives us such a good insight into the history of the war.

General Hervey:

I have pleasure in seconding that motion.

Chairman:

Gentlemen, you have heard the motion that a hearty vote of thanks be tendered to Captain Kendall. All in favor please signify in the usual way. Carried. (Applause.)

Captain Kendall, it gives me great pleasure to convey to you the thanks of the Canadian Railway Club for your paper and I wish also to thank you personally, as well as those who have taken part here to-night.

Captain Kendall:

I thank you very much for your appreciation of my poor efforts. The writing of this paper has given me an opportunity of recording a number of things that I wished to keep. I should like to get some copies of the paper when printed to send to some of the other boys.

Chairman:

The subject for the paper for next meeting will be announced later on the post cards in the usual way.

Before we adjourn I wish to announce that the usual coffee and sandwiches will be served at the room to our right.

A motion to adjourn will now be in order.

A Member: I move we adjourn.

Another Member: Seconded. Carried.

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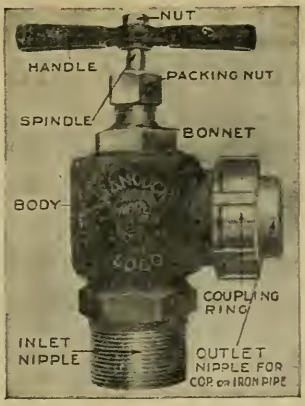


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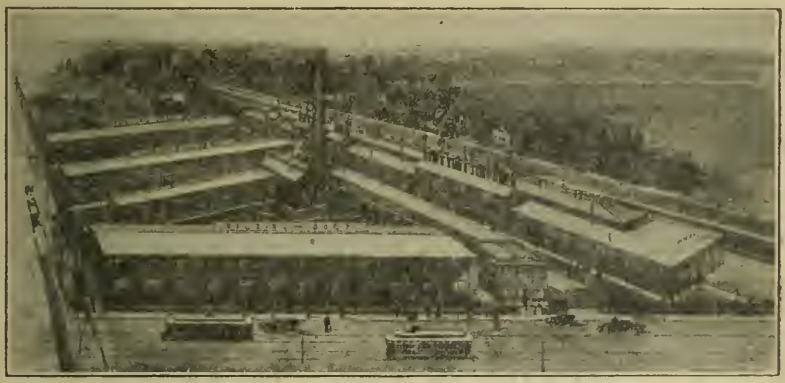

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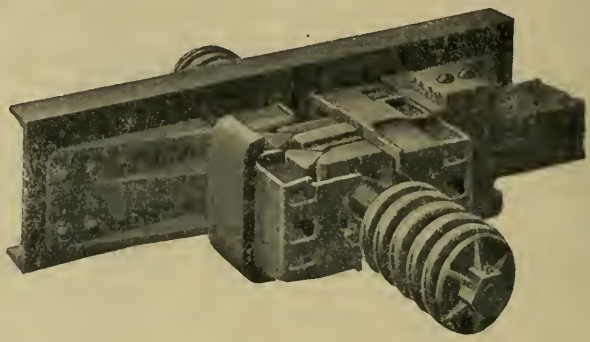

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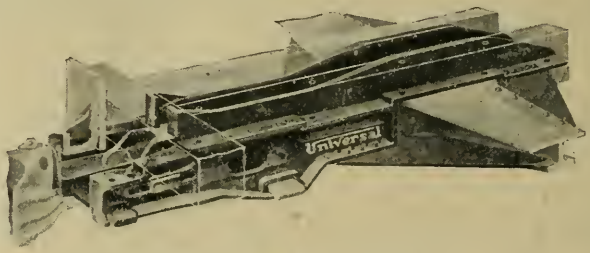


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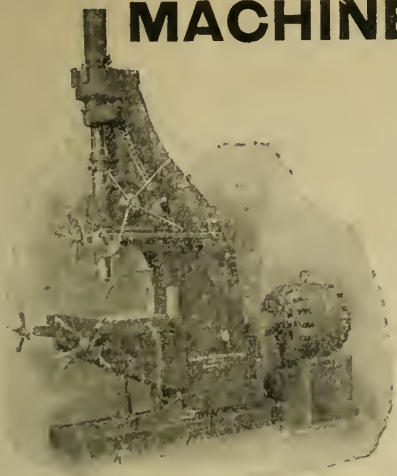

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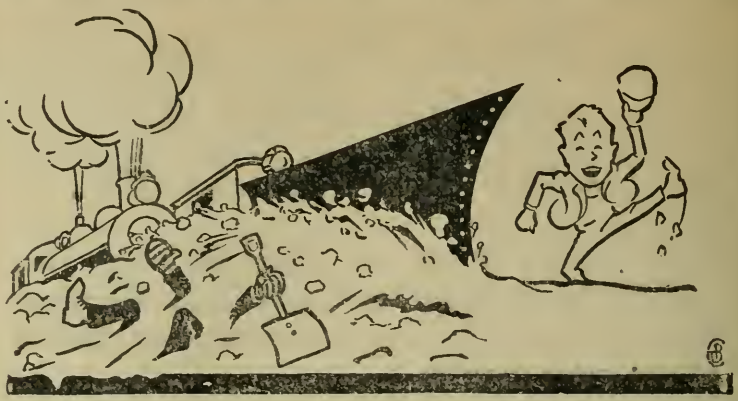

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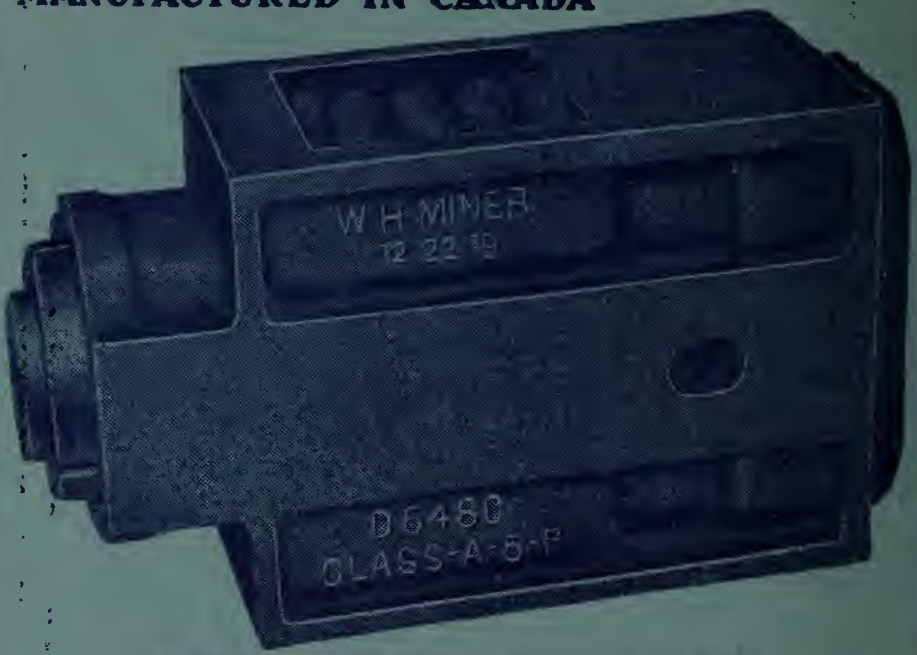


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